

EXHIBIT B
CLAIM CHART

EXHIBIT B

ICErAQ 10

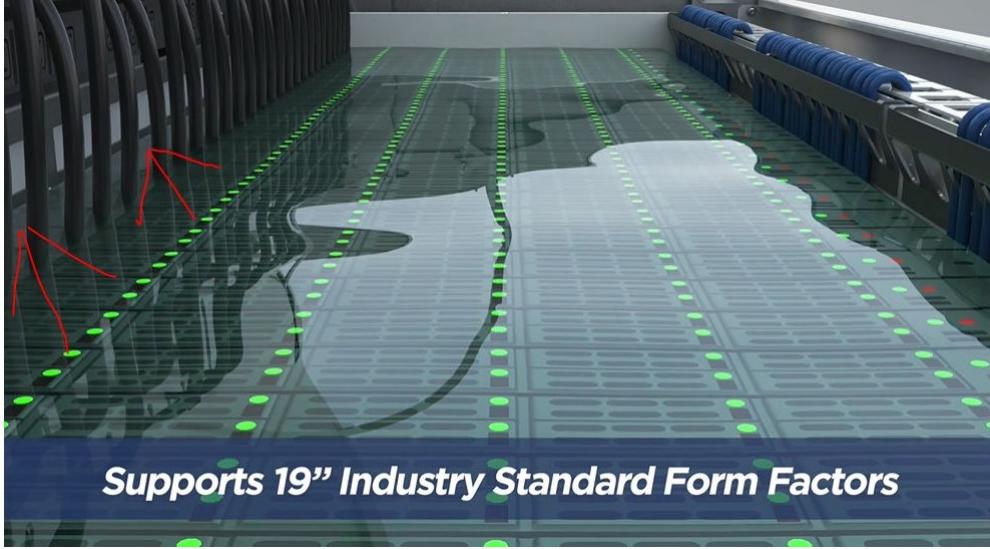
Claim Element(s)	Where Found in Accused Instrumentalities
1. An Appliance immersion cooling system comprising:	<p>To the extent the preamble is limiting, below is an image of the ICErAQ 10 which depicts an appliance immersion cooling system.</p> 
a. tank adapted to immerse in a dielectric fluid a plurality of electrical appliances, each in a respective appliance slot distributed vertically along, and extending transverse to, a long wall of the tank, the tank comprising:	<p>Below is an image of the ICErAQ Flex which depicts a tank adapted to immerse in a dielectric fluid a plurality of electrical appliances, each in a respective appliance slot distributed vertically along, and extending transverse to, a long wall of the tank. The ICErAQ Flex has a tank that holds multiple enterprise servers. Each server is set into an appliance slot, and each is fully immersed in a dielectric fluid.</p>

	
i. A weir, integrated horizontally into the long wall of the tank adjacent all appliance slots, having an overflow lip adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot.	<p>Below is an image from a video located Green Revolution Cooling, Inc.'s website found at url https://www.grcooling.com/assets/seth-estrada-with-mineyourbiz-interviews-grcs-client-development-manager-neal-cox/ which depicts the weir located along the long wall of the tank. The weir is shown as the gray boxes on the left side of the image below. The gray boxes are mesh which allows the fluid to flow freely into the fluid recover reservoir, facilitating uniform recovery.</p>  <p>Below is an image from a video located Green Revolution Cooling, Inc.'s website found at url https://www.grcooling.com/learning-center/dcd-ny-2021-webinar/ The weir in this image is on the right side of the image depicted by mesh boxes in the white wall on the right side of the liquid. This image depicts the weir located along the long wall of the tank:</p>



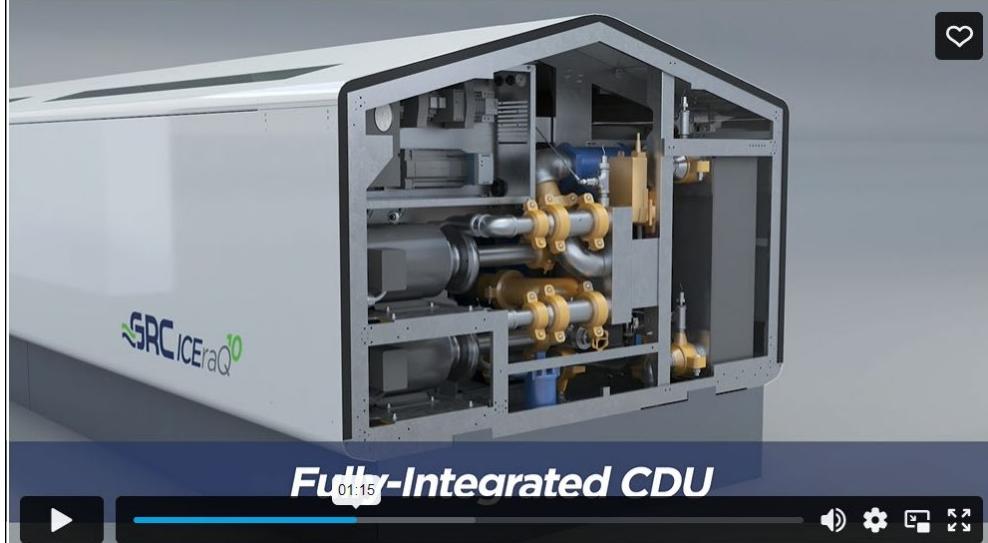
The image below is from the same source. This image is a close up of the image above. This image clearly depicts mesh in the wall which acts as a weir:



	<p>Further, the image below depicts the GRC ICERAQ 10 weir in action inside the tank in animated form. The picture is annotated by red arrows depicting the location of the weir.</p> 
ii. A dielectric fluid recovery reservoir positioned vertically beneath the overflow lip of the weir and adapted to receive the dielectric fluid over the weir.	A weir is a gravity fed structure that allows fluid to overflow a lip. The overflowing fluid must be received at a recovery reservoir for collection prior to the fluid being circulated by a pump. Because there is a gravity flow overflow weir in the GRC system, there will be a fluid recovery reservoir. The recovery reservoir must be located vertically beneath the overflow lip to collect the dielectric fluid.

b. A primary circulation facility adapted to circulate the dielectric fluid through the tank, comprising:

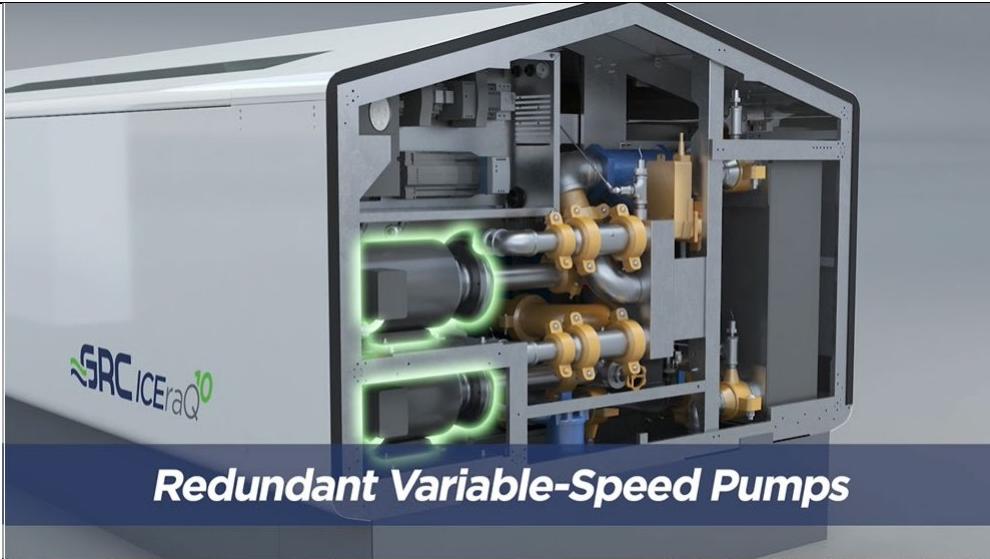
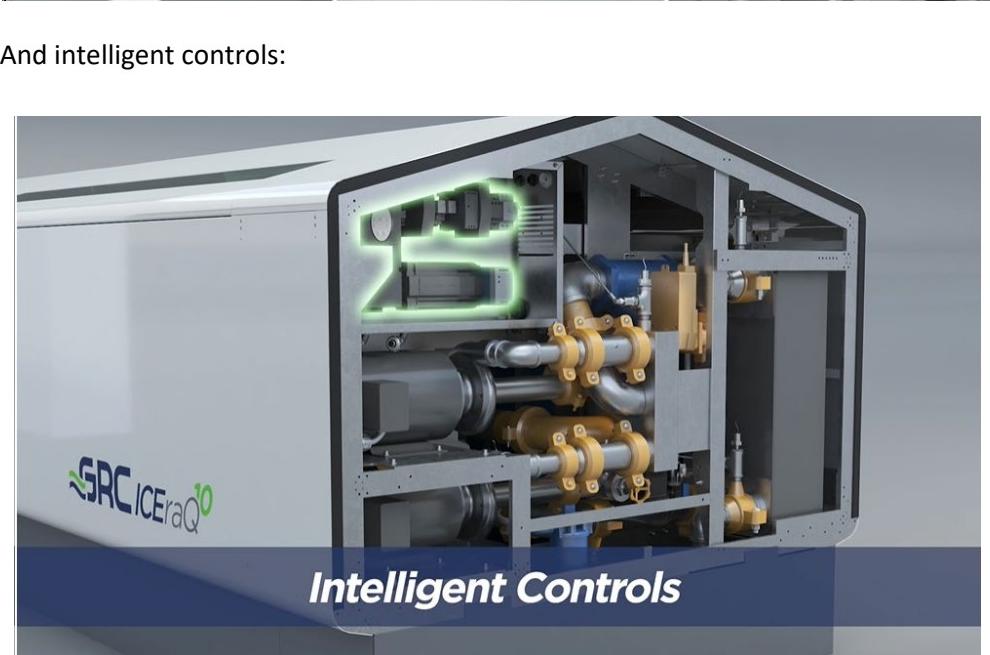
Below is an image of a primary circulation facility found at <https://www.grcooling.com/ICEraQ/>

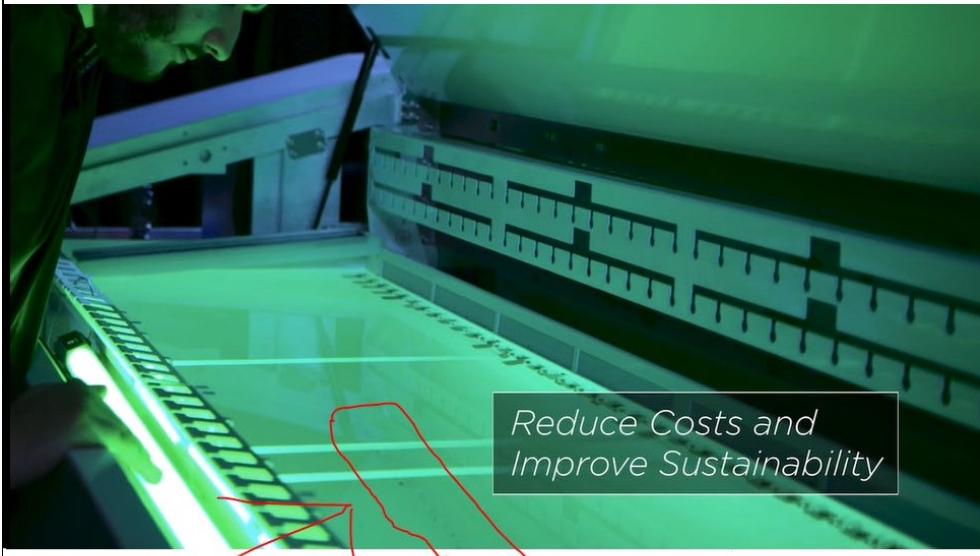


This system contains a high efficiency heat exchanger:



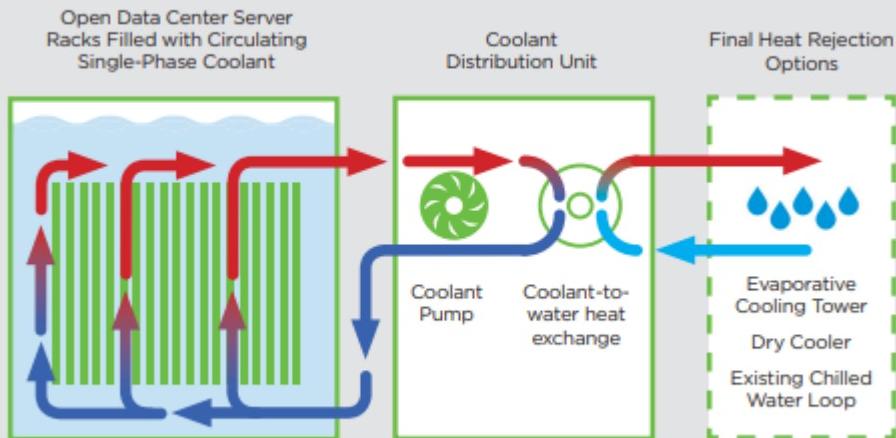
Redundant variable-speed pumps. The pumps and associated plumbing circulate the dielectric fluid through the tank.

	 <p>Redundant Variable-Speed Pumps</p>
	<p>And intelligent controls:</p>  <p>Intelligent Controls</p>
i. A plenum, positioned adjacent the bottom of the tank, adapted to dispense the dielectric fluid substantially uniformly upward through each appliance slot;	<p>On information and belief, the ICEraQ contains a plenum which is adjacent to the bottom of the tank adapted to dispense the dielectric fluid substantially uniformly upward through each appliance slot. The plenum is depicted faintly. Holes can be seen in the image below on the bottom of the tank in a uniform line. Below is an image which depicts the potential presence of a plenum, as indicated by the red box annotated on the image:</p>

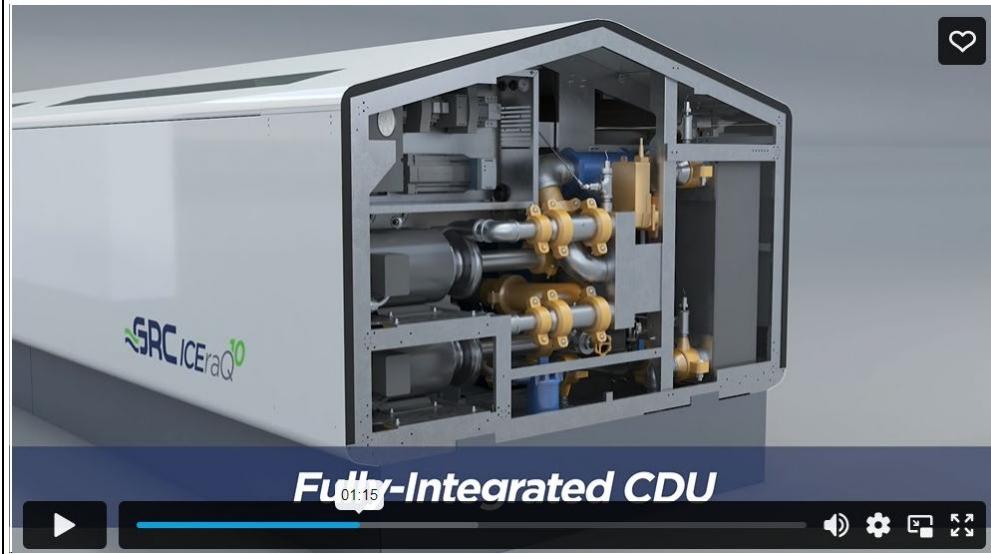
	 <p><i>Reduce Costs and Improve Sustainability</i></p>
c. A secondary fluid circulation facility adapted to extract heat from the dielectric fluid circulation in the primary circulation facility, and dissipate to the environment the heat so extracted and	Below is an image of the operation of the ICEraQ which identifies a secondary fluid circulation system:

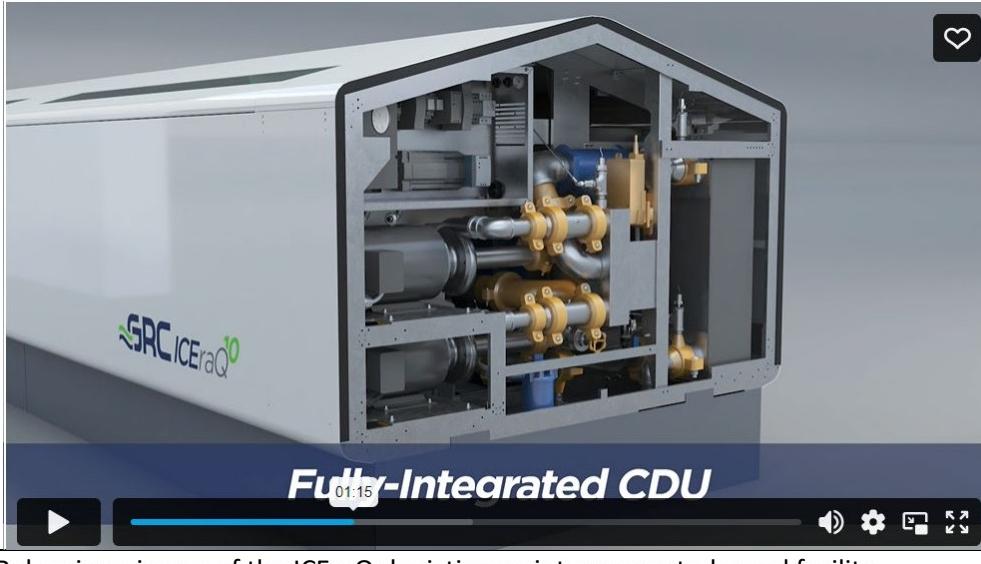
	<h2>How GRC Liquid Immersion Cooling Works</h2> <p>The diagram illustrates the GRC liquid immersion cooling process. It starts with 'Open Data Center Server Racks Filled with Circulating Single-Phase Coolant' (represented by green vertical bars in a blue liquid bath). Red arrows show the coolant flowing through the racks. This heated coolant then enters a 'Coolant Distribution Unit' (represented by a white box containing a pump and a heat exchanger). A 'Coolant Pump' moves the coolant, and it undergoes 'Coolant-to-water heat exchange'. Finally, the cooled coolant exits the unit and enters an 'Evaporative Cooling Tower' (represented by a white tank with water droplets). The tower has three options for final heat rejection: 'Evaporative Cooling Tower', 'Dry Cooler', or 'Existing Chilled Water Loop'. A note at the bottom states: 'Heated coolant exits top of rack. Coolant returns to rack from heat exchanger at user-specified temperature.'</p> <p>Open Data Center Server Racks Filled with Circulating Single-Phase Coolant</p> <p>Coolant Distribution Unit</p> <p>Final Heat Rejection Options</p> <p>Coolant Pump</p> <p>Coolant-to-water heat exchange</p> <p>Evaporative Cooling Tower</p> <p>Dry Cooler</p> <p>Existing Chilled Water Loop</p> <p>Heated coolant exits top of rack. Coolant returns to rack from heat exchanger at user-specified temperature.</p>
d. a control facility adapted to coordinate the operation of the primary and secondary fluid circulation facilities as a function of the temperature of the dielectric fluid in the tank.	<p>Below is an image identifying a control facility. The Control Facility is identified as a coolant distribution unit. Further the ICEraQ contains intelligent controls. These are depicted in an infographic depicting how the coolant distribution unit works to coordinate the operation of the primary and secondary circulation facilities a function of the dielectric fluid in the tank:</p>

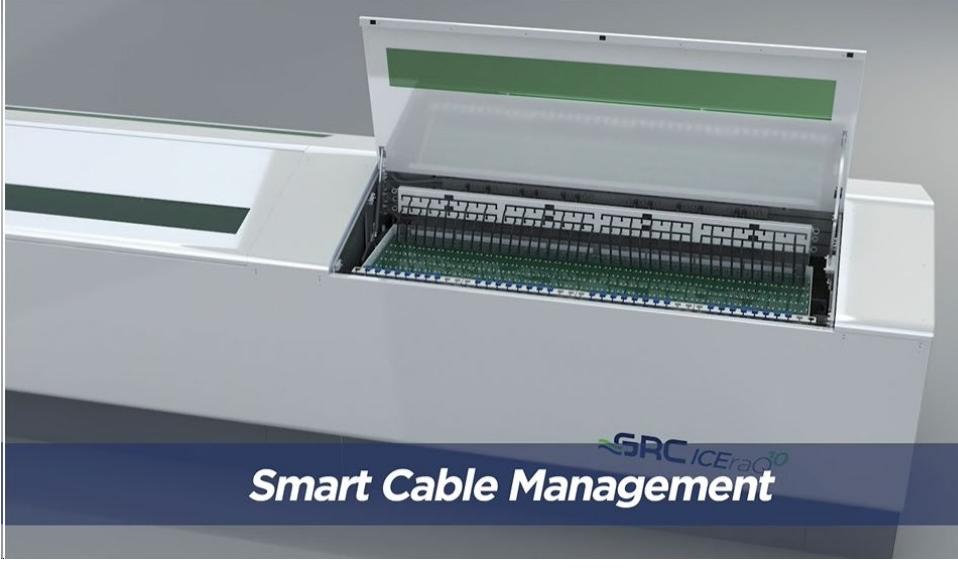
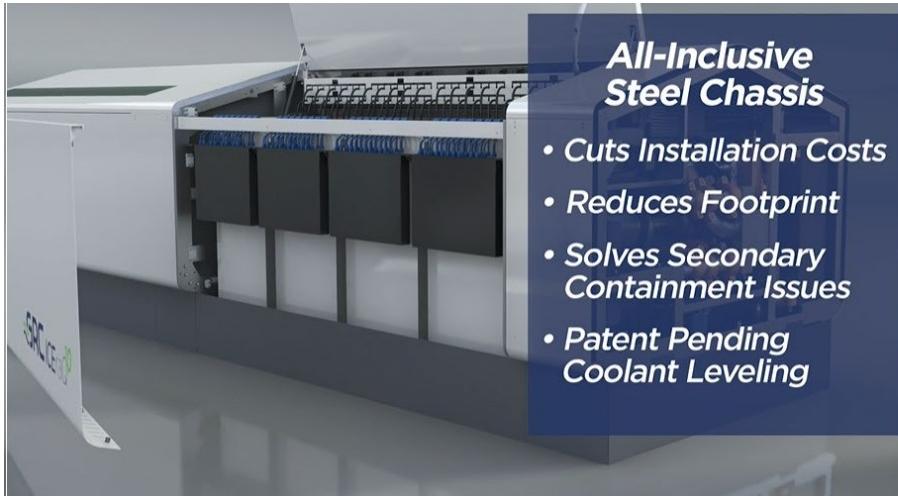
How GRC Liquid Immersion Cooling Works



Heated coolant exits top of rack. Coolant returns to rack from heat exchanger at user-specified temperature.



	
2. The system of claim 1 wherein the tank and primary circulation facility comprise a highly-integrated module.	<p>Below is an image of the ICEraQ identify that the primary circulation facility is comprised of a highly integrated module.</p> 
3. The system of claim 1 wherein the tank further comprises: a. An interconnected panel facility adapted to mount appliance support equipment.	<p>Below is an image of the ICEraQ depicting an interconnected panel facility adapted to mount appliance support equipment.</p>

	
	 <p>All-Inclusive Steel Chassis</p> <ul style="list-style-type: none"> • Cuts Installation Costs • Reduces Footprint • Solves Secondary Containment Issues • Patent Pending Coolant Leveling
<p>6. A tank module adapted for use in an appliance immersion cooling system, the tank module comprising:</p> <p>a. a tank adapted to immerse in a dielectric fluid a plurality of electrical appliances, each in a respective appliance slot distributed vertically along, and extending transverse to, a long wall of the tank.</p>	<p>Below is an image of the ICEraQ Flex which depicts a tank adapted to immerse in a dielectric fluid a plurality of electrical appliances, each in a respective appliance slot distributed vertically along, and extending transverse to, a long wall of the tank. The ICEraQ Flex has a tank that holds multiple enterprise servers. Each server is set into an appliance slot, and each is fully immersed in a dielectric fluid.</p>

<p>appliances, each in a respective appliance slot distributed vertically along, and extending transverse to, a long wall of the tank, the tank comprising:</p>	
<p>i. A weir, integrated horizontally into the long wall of the tank adjacent all appliance slots, having an overflow lip adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot; and;</p>	<p>Below is an image from a video located Green Revolution Cooling, Inc.'s website found at url https://www.grcooling.com/assets/seth-estrada-with-mineyourbiz-interviews-grcs-client-development-manager-neal-cox/ which depicts the weir located along the long wall of the tank. The weir is shown as the gray boxes on the left side of the image below. The gray boxes are mesh which allows the fluid to flow freely into the fluid recovery reservoir.</p> <div style="text-align: center;">  </div> <p>Below is an image from a video located Green Revolution Cooling, Inc.'s website found at url https://www.grcooling.com/learning-center/dcd-ny-2021-webinar/</p>

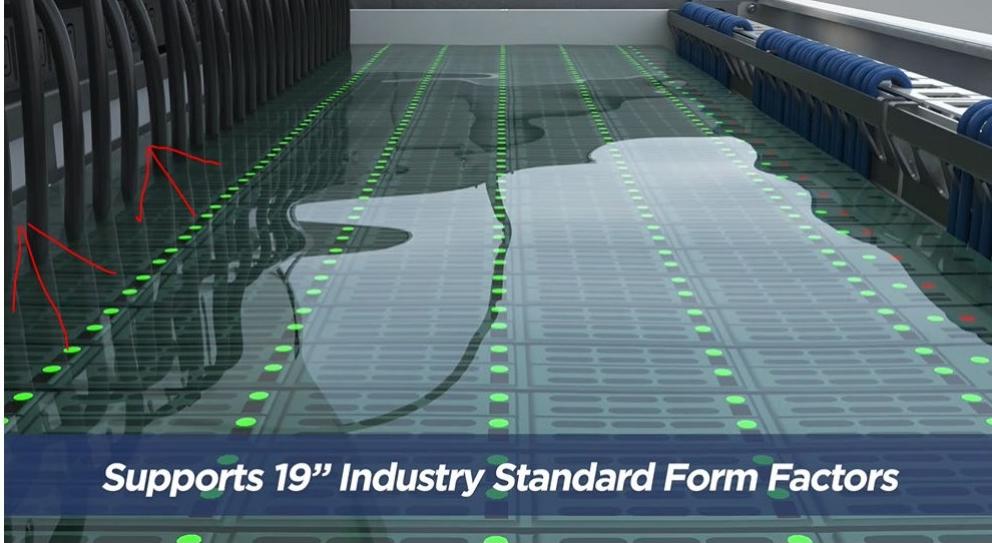
The weir in this image is on the right side of the image depicted by mesh boxes in the white wall on the right side of the liquid. This image depicts the weir located along the long wall of the tank:



The image below is from the same source. This image is a close up of the image above. This image clearly depicts mesh in the wall which acts as a weir:

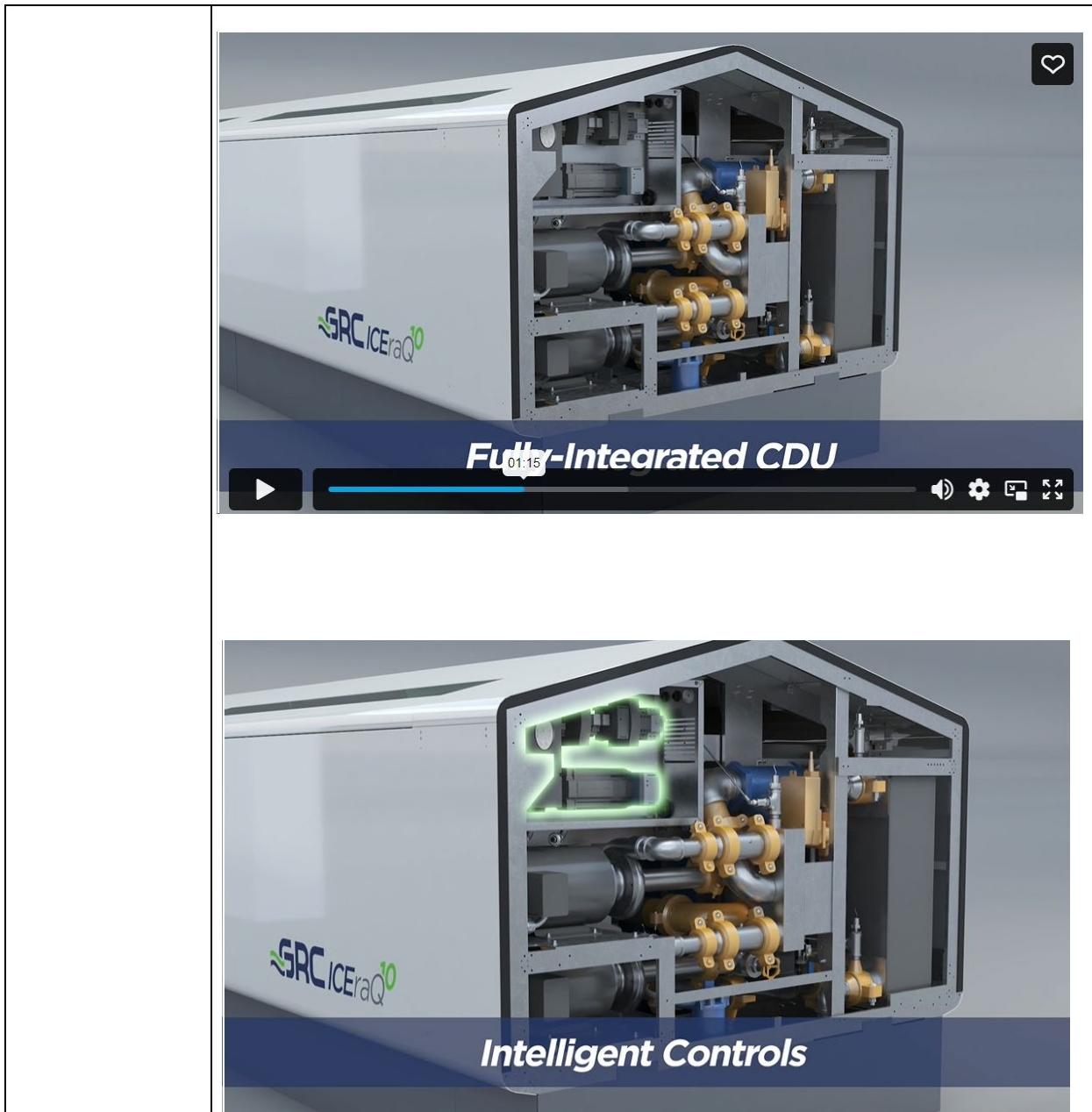


Further, the image below depicts the GRC ICERAQ 10 weir in action inside the tank in animated form. The picture is annotated by red arrows depicting the location of the weir.

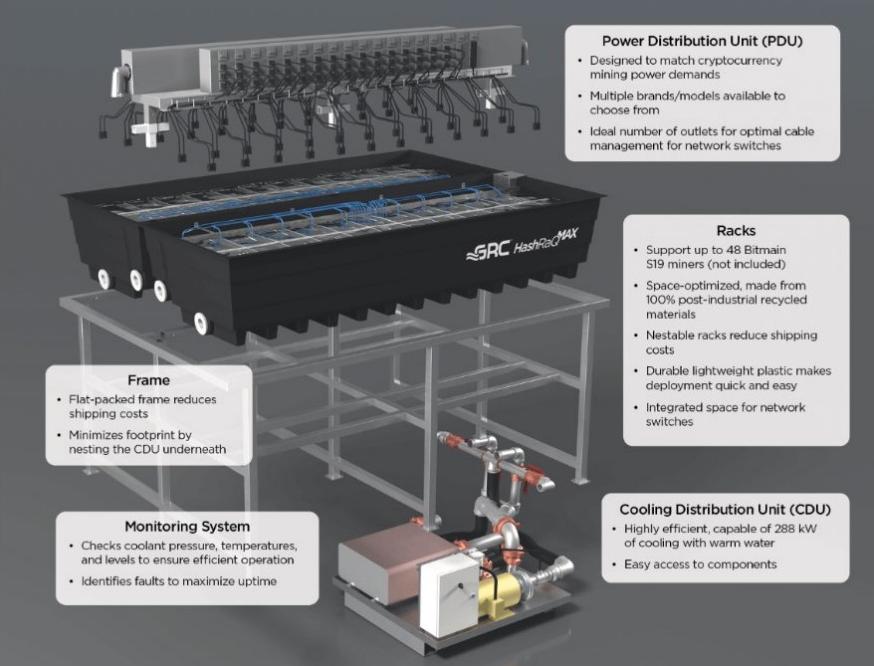
	 <p>Supports 19" Industry Standard Form Factors</p>
ii. A dielectric fluid recovery reservoir positioned vertically beneath the overflow lip of the weir and adapted to receive the dielectric fluid as it flows over the weir;	A weir is a gravity fed structure that allows fluid to overflow a lip. The overflowing fluid must be received at a recovery reservoir for collection prior to the fluid being circulated by a pump. Because there is a gravity flow overflow weir in the GRC system, there will be a fluid recovery reservoir. The recovery reservoir must be located vertically beneath the overflow lip to collect the dielectric fluid.
b. A primary circulation facility adapted to circulate the dielectric fluid through the tank, comprising:	Below is an infographic which depicts the primary circulation facility of the ICEraQ 10.

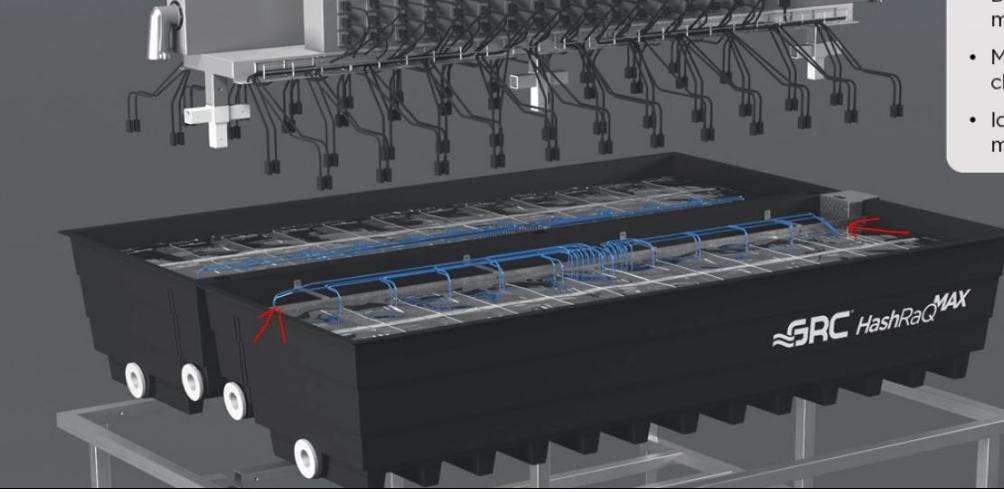
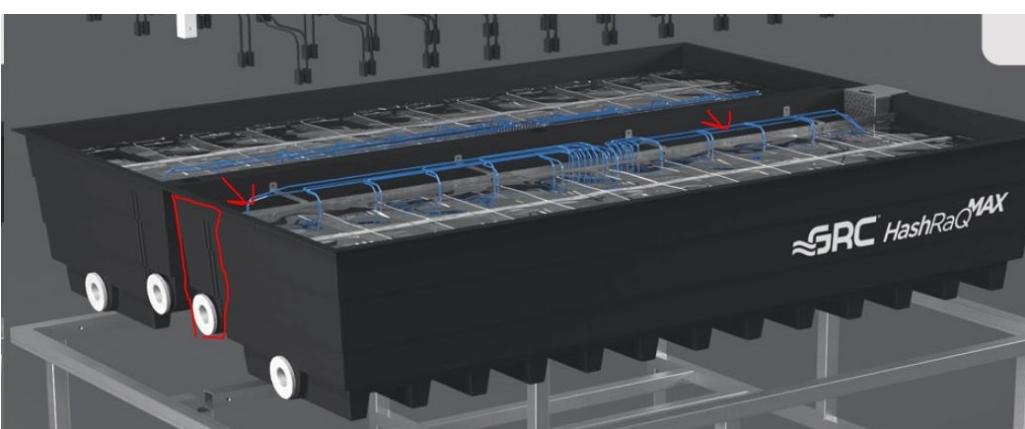
	<h2>How GRC Liquid Immersion Cooling Works</h2> <p>The diagram illustrates the GRC liquid immersion cooling process. It starts with 'Open Data Center Server Racks Filled with Circulating Single-Phase Coolant'. The coolant circulates through the racks. This heated coolant then enters a 'Coolant Distribution Unit' which contains a 'Coolant Pump' and a 'Coolant-to-water heat exchange'. From the heat exchanger, the coolant is sent to 'Final Heat Rejection Options', which include an 'Evaporative Cooling Tower', a 'Dry Cooler', or an 'Existing Chilled Water Loop'. The final step is the rejection of heat as shown by water droplets.</p> <p>Heated coolant exits top of rack. Coolant returns to rack from heat exchanger at user-specified temperature.</p>
i. A plenum, positioned adjacent the bottom of the tank, adapted to dispense the dielectric	<p>On information and belief, the ICEraQ contains a plenum which is adjacent to the bottom of the tank adapted to dispense the dielectric fluid substantially uniformly upward through each appliance slot. Below is an image which depicts the potential presence of a plenum.</p>

<p>fluid substantially uniformly upward through each appliance slot; and</p>	
<p>c. A control facility adapted to control the operation of the primary fluid circulation facility as a function of the temperature of the dielectric fluid in the tank.</p>	<p>Below is an image identifying a control facility. The Control Facility is identified as a coolant distribution unit. Further the ICEraQ contains intelligent controls. These are depicted in an infographic depicting how the coolant distribution unit works to coordinate the operation of the primary and secondary circulation facilities a function of the dielectric fluid in the tank:</p> <div style="text-align: center;"> <h3>How GRC Liquid Immersion Cooling Works</h3> <p>The diagram illustrates the liquid immersion cooling process. It shows a flow from server racks (left) through a coolant distribution unit (middle) to final heat rejection options (right). The middle section includes a pump and heat exchanger. A note at the bottom states: "Heated coolant exits top of rack. Coolant returns to rack from heat exchanger at user-specified temperature."</p> </div>



HashRaQ Max

Claim Element(s)	Where Found in Accused Instrumentalities
1. An Appliance immersion cooling system comprising:	<p>To the extent that the preamble is limiting, below is an image of the HashRaQ depicting a cooling system.</p> 
2. tank adapted to immerse in a dielectric fluid a plurality of electrical appliances, each in a respective appliance slot distributed vertically along, and extending transverse to, a long wall of the tank, the tank comprising:	<p>Below is an image of the HashRaQ which depicts a tank adapted to immerse in a dielectric fluid a plurality of electrical appliances each in a respective appliance slot distributed vertically along, and extending transverse to, a long wall of the tank.</p>  <ul style="list-style-type: none"> Power Distribution Unit (PDU) <ul style="list-style-type: none"> Designed to match cryptocurrency mining power demands Multiple brands/models available to choose from Ideal number of outlets for optimal cable management for network switches Frame <ul style="list-style-type: none"> Flat-packed frame reduces shipping costs Minimizes footprint by nesting the CDU underneath Monitoring System <ul style="list-style-type: none"> Checks coolant pressure, temperatures, and levels to ensure efficient operation Identifies faults to maximize uptime Racks <ul style="list-style-type: none"> Support up to 48 Bitmain S19 miners (not included) Space-optimized, made from 100% post-industrial recycled materials Nestable racks reduce shipping costs Durable lightweight plastic makes deployment quick and easy Integrated space for network switches Cooling Distribution Unit (CDU) <ul style="list-style-type: none"> Highly efficient, capable of 288 kW of cooling with warm water Easy access to components

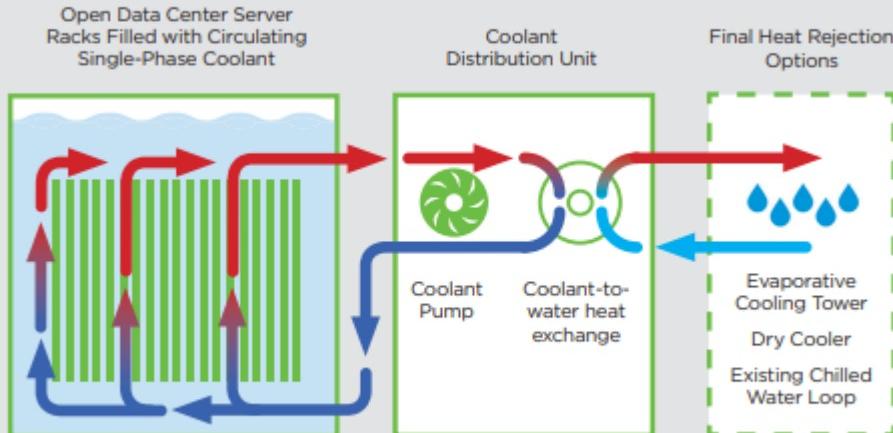
<p>3. A weir, integrated horizontally into the long wall of the tank adjacent all appliance slots, having an overflow lip adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot.</p>	<p>Below is an image of the HashRaQ depicting a weir located under the Power Dispersion Units along the center walls of the interior of the tank. This weir is adjacent to all appliance slots and adapted to allow for substantially uniform recovery of the dielectric fluid flowing through the appliance slots. The weir is indicated by red arrows and is a metal wall in the tank which separates the fluid from the overflow reservoir. This can be seen in the image below:</p> 
<p>4. A dielectric fluid recovery reservoir positioned vertically beneath the overflow lip of the weir and adapted to receive the dielectric fluid over the weir.</p>	<p>Below is an image of the HashRaQ depicting a fluid recovery reservoir which are depicted underneath the power distribution units and cable management system. The reservoir has pipes exiting the tank near the center of the unit. The fluid recovery reservoir is indicated by a red rectangle and arrows in the image below:</p> 
<p>5. A primary circulation facility adapted to circulate the</p>	<p>Below is an image of the HashRaQ indicating that the image contains a cooling distribution unit, which circulates the hot fluid flowing form the tank through the cooling system, and then circulates the cool fluid back through the tank. This meets the claim limitation of a primary circulation facility.</p>

<p>dielectric fluid through the tank, comprising:</p>	<p>Power Distribution Unit (PDU)</p> <ul style="list-style-type: none"> Designed to match cryptocurrency mining power demands Multiple brands/models available to choose from Ideal number of outlets for optimal cable management for network switches <p>Racks</p> <ul style="list-style-type: none"> Support up to 48 Bitmain S19 miners (not included) Space-optimized, made from 100% post-industrial recycled materials Nestable racks reduce shipping costs Durable lightweight plastic makes deployment quick and easy Integrated space for network switches <p>Frame</p> <ul style="list-style-type: none"> Flat-packed frame reduces shipping costs Minimizes footprint by nesting the CDU underneath <p>Monitoring System</p> <ul style="list-style-type: none"> Checks coolant pressure, temperatures, and levels to ensure efficient operation Identifies faults to maximize uptime <p>Cooling Distribution Unit (CDU)</p> <ul style="list-style-type: none"> Highly efficient, capable of 288 kW of cooling with warm water Easy access to components
<p>A plenum, positioned adjacent the</p>	<p>Below is an image of the HashRaQ which depicts a plenum positioned adjacent the bottom of the tank, adapted to dispense the dielectric fluid substantially uniformly upward through each appliance slot.</p>

<p>bottom of the tank, adapted to dispense the dielectric fluid substantially uniformly upward through each appliance slot; and</p>	
<p>A secondary fluid circulation facility adapted to extract heat from the dielectric fluid circulation in</p>	<p>Below is an infographic which depicts the primary and secondary circulation facilities working in tandem. This image, on information and belief, applies to the application of the primary and secondary circulation facilities in the HashRaQ.</p>

the primary circulation facility and dissipate to the environment the heat so extracted.

How GRC Liquid Immersion Cooling Works

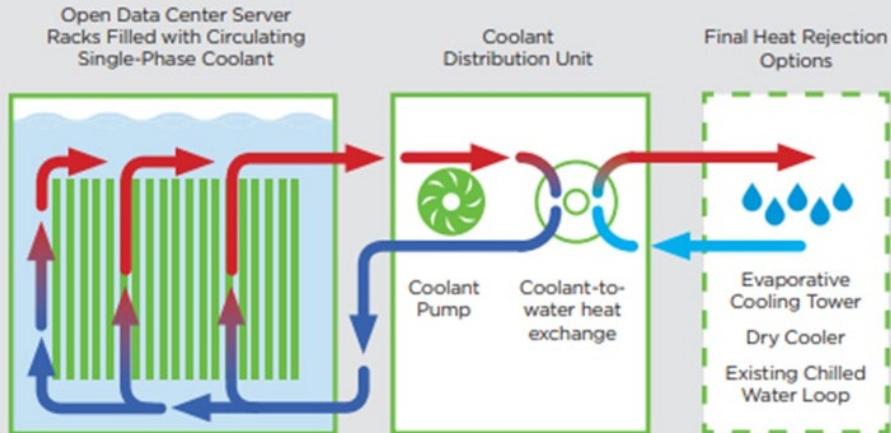


Heated coolant exits top of rack. Coolant returns to rack from heat exchanger at user-specified temperature.

A control facility adapted to control the operation of the primary fluid circulation facility as a function of the temperature of the dielectric fluid in the tank.

The HashRaQ has a Coolant Distribution Unit that operates as a control facility. This is confirmed below in a HashRaQ Max information sheet under monitoring and reporting. This information sheet details a control system adapted to control the operation of the primary and secondary circulation facilities as a function of the temperature of the dielectric fluid in the tank.

How GRC Liquid Immersion Cooling Works



Heated coolant exits top of rack. Coolant returns to rack from heat exchanger at user-specified temperature.



General Product Specifications

Number of Immersion-Cooled Racks	2
Total Miner Capacity	48 Bitmain S19 miners
Number of CDUs per Double-Capacity Rack	1 ¹
Total Cooling Capacity	
Chiller-Free Water: 40°C (104°F)	288 kW ⁴
Over-Clocking Capability	6 kW/miner ⁵
pPUE ⁶	<1.02
Standard PDU Details	
Quantity	Four
Outlets	24 C19 each
Architecture	Basic
Circuit Breaker Amps	160A each
Alternate PDUs Available	
Overall Dimensions (L x W x H)	2.85 m x 1.97 m x 1.55 m (9.4 ft x 6.5 ft x 5.1 ft)
Estimated Component Weights	
Racks, CDU, and Stand	227 kg (500 lbs)
Coolant	860 kg (1894 lbs)
Estimated Weight When Commissioned ⁷	1950 kg (4300 lbs)

Power and Water

Final Heat Rejection Options	Flexible options can include: Adiabatic/evaporative cooling tower Dry cooler ⁸
Water Requirements	Maximum particulate size 0.8 mm ⁹ Input temperature 40°C (104°F) Recirculating flow 29.5 m ³ /yr (130 gpm) 6 to 9°C dT (10 to 15°F dT) Connection 73.0 mm (2.5") male Victaulic
CDU Power Requirements	1x 3PH 460VAC 60Hz, max power consumption 3.7kW
PDU Power Requirements	4x 160A 415V/240VAC ¹⁰

Monitoring and Reporting

Platform	IoT with Modbus TCP/IP for BMS interface
Alerting	Alerts via DCIM platform
DCIM/BMS Integration Protocols	Modbus
Measurements and Fault Detection	Operating temperatures of coolant and water
	Coolant pressure
	Coolant levels

Site Requirements

Client provides	Access to power and recirculating water ¹¹ Secondary containment Level surface (slab or raised floor) with slope <1/650 Standard data center fire suppression as required
Operating Environment	Ambient temperature 5 to 45°C (40 to 113°F)

Delivery and Installation

Lead Time	Typically ships within 12 weeks after receipt of purchase order.
Shipping Terms	Ex-Works
On-site Installation and Training ¹²	One business day per unit

Warranty

Includes 90-day limited warranty against defects in material and workmanship with limited support. Annual monitoring plans	Other plans available for additional cost: Full year limited warranties and support plans Annual maintenance plans
-------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------

¹ An additional spare CDU available for additional cost.

² CDU is designed for up to 288 kW (6 kW per miner). Actual cooling capacity will depend on end user's specified level of over-clocking, as well as final heat rejection system.

³ Over-clocking greater than 6 kW/miner may require colder/chilled water.

⁴ CDU is designed for up to 288 kW (6 kW per miner). Actual cooling capacity will depend on end user's specified level of over-clocking.

⁵ Includes coolant, mining equipment, cables, and cords. Actual weight depends on configuration.

⁶ System cooling performance dependant on climate.

⁷ Failures resulting from particulates exceeding 0.8mm or poor water quality will void warranty.

⁸ One input power feed per PDU.

⁹ GRC and HTS can assist in heat rejection design/implementation.

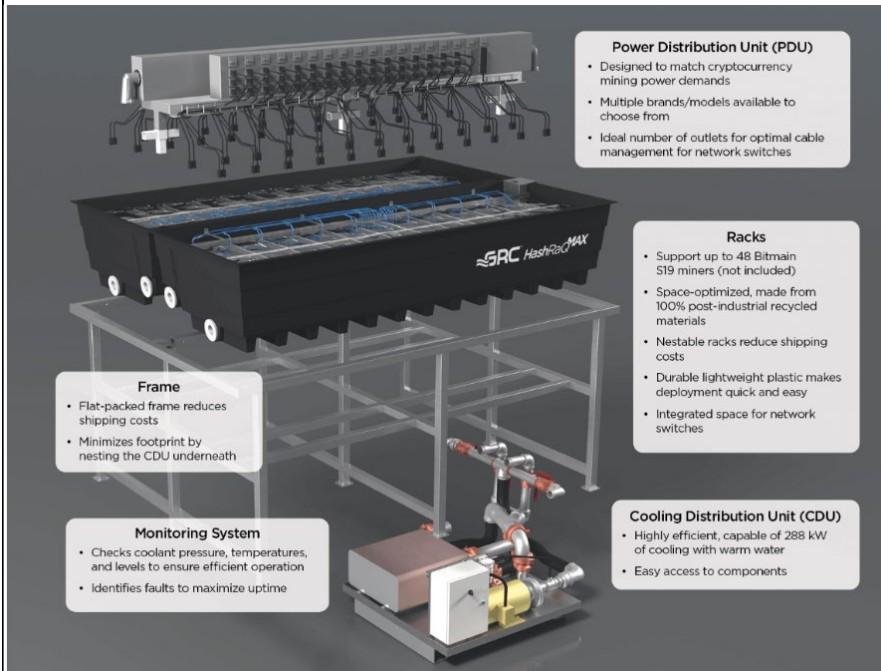
¹⁰ Installation applies to installing the rack in the data center space only and does not include installation of digital asset mining equipment.

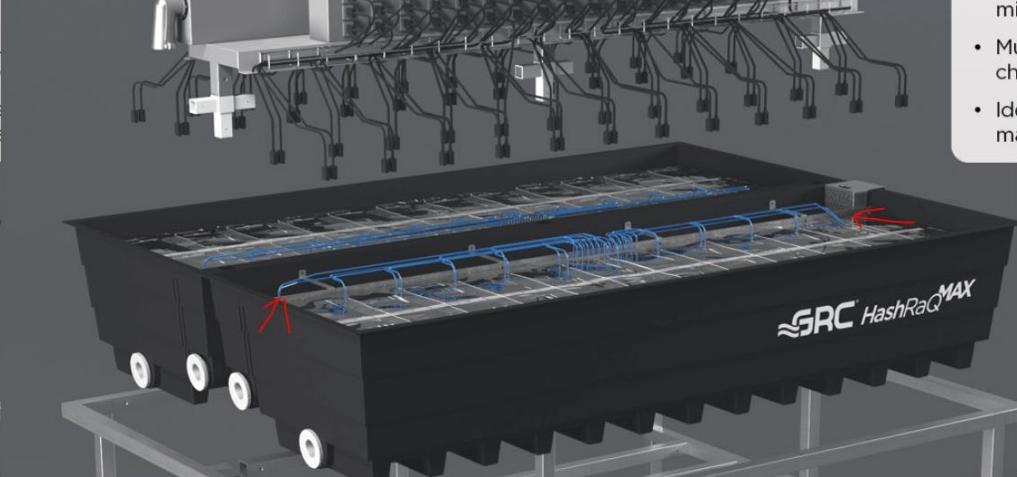
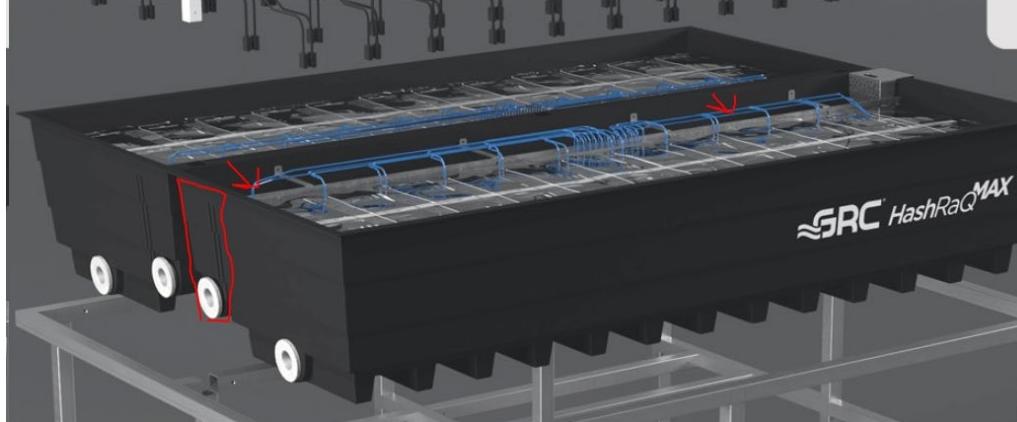


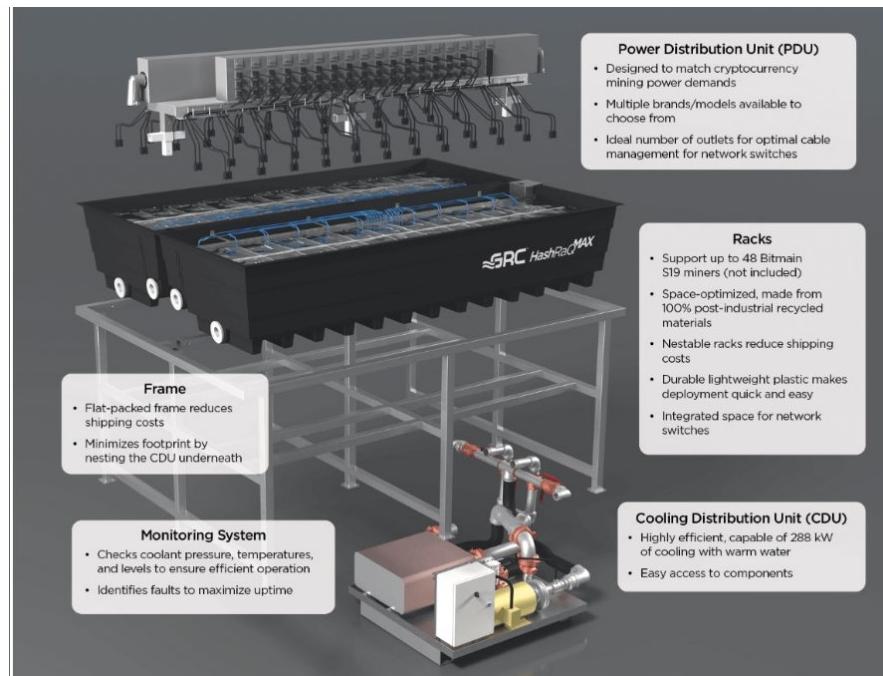
2. The system of claim 1 wherein the tank and primary circulation facility comprise a highly-integrated module.

Below is an image of the HashRaQ depicting a highly integrated module:

	<p>Power Distribution Unit (PDU)</p> <ul style="list-style-type: none"> Designed to match cryptocurrency mining power demands Multiple brands/models available to choose from Ideal number of outlets for optimal cable management for network switches <p>Racks</p> <ul style="list-style-type: none"> Support up to 48 Bitmain S19 miners (not included) Space-optimized, made from 100% post-industrial recycled materials Nestable racks reduce shipping costs Durable lightweight plastic makes deployment quick and easy Integrated space for network switches <p>Frame</p> <ul style="list-style-type: none"> Flat-packed frame reduces shipping costs Minimizes footprint by nesting the CDU underneath <p>Monitoring System</p> <ul style="list-style-type: none"> Checks coolant pressure, temperatures, and levels to ensure efficient operation Identifies faults to maximize uptime <p>Cooling Distribution Unit (CDU)</p> <ul style="list-style-type: none"> Highly efficient, capable of 288 kW of cooling with warm water Easy access to components
<p>3. The system of claim 1 wherein the tank further comprises: An interconnected panel facility adapted to mount appliance support equipment.</p>	<p>Below is an image of the ICEraQ depicting an interconnected panel facility adapted to mount appliance support equipment.</p>

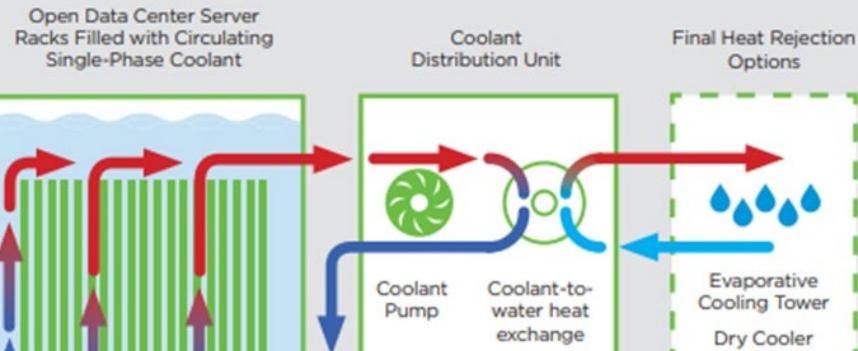
<p>6. A tank module adapted for use in an appliance immersion cooling system, the tank module comprising:</p>	<p>To the extent that the preamble is limiting, below is an image of the HashRaQ depicting a cooling system.</p> 
<p>a. a tank adapted to immerse in a dielectric fluid a plurality of electrical appliances, each in a respective appliance slot distributed vertically along, and extending transverse to, a long wall of the tank, the tank comprising:</p>	<p>Below is an image of the HashRaQ which depicts a tank adapted to immerse in a dielectric fluid a plurality of electrical appliances each in a respective appliance slot distributed vertically along, and extending transverse to, a long wall of the tank.</p>  <ul style="list-style-type: none"> Power Distribution Unit (PDU) <ul style="list-style-type: none"> Designed to match cryptocurrency mining power demands Multiple brands/models available to choose from Ideal number of outlets for optimal cable management for network switches Frame <ul style="list-style-type: none"> Flat-packed frame reduces shipping costs Minimizes footprint by nesting the CDU underneath Monitoring System <ul style="list-style-type: none"> Checks coolant pressure, temperatures, and levels to ensure efficient operation Identifies faults to maximize uptime Racks <ul style="list-style-type: none"> Support up to 48 Bitmain S19 miners (not included) Space-optimized, made from 100% post-industrial recycled materials Nestable racks reduce shipping costs Durable lightweight plastic makes deployment quick and easy Integrated space for network switches Cooling Distribution Unit (CDU) <ul style="list-style-type: none"> Highly efficient, capable of 288 kW of cooling with warm water Easy access to components
<p>iii. A weir, integrated horizontally into the long wall of the tank</p>	<p>Below is an image of the HashRaQ depicting a weir located under the Power Dispersion Units along the center walls of the interior of the tank. This weir is adjacent to all appliance slots and adapted to allow for substantially uniform recovery of the dielectric fluid flowing through the appliance slots. The weir is indicated by red arrows, and is a metal wall in the</p>

<p>adjacent all appliance slots, having an overflow lip adapted to facilitate substantially uniform recovery of the dielectric fluid flowing through each appliance slot; and;</p>	<p>tank which separates the fluid from the overflow reservoir. This can be seen in the image below:</p> 
<p>iv. A dielectric fluid recovery reservoir positioned vertically beneath the overflow lip of the weir and adapted to receive the dielectric fluid as it flows over the weir;</p>	<p>Below is an image of the HashRaQ depicting a fluid recovery reservoir which are depicted underneath the power distribution units and cable management system. The reservoir has pipes exiting the tank near the center of the unit. The fluid recovery reservoir is indicated by a red rectangle and arrows in the image below:</p> 
<p>d. A primary circulation facility adapted to circulate the dielectric fluid through the tank, comprising:</p>	<p>Below is an image of the HashRaQ indicating that the image contains a cooling distribution unit, which circulates the hot fluid flowing form the tank through the cooling system, and then circulates the cool fluid back through the tank. This meets the claim limitation of a primary circulation facility.</p>



Below is an infographic that shows the operation of the cooling distribution unit.

How GRC Liquid Immersion Cooling Works



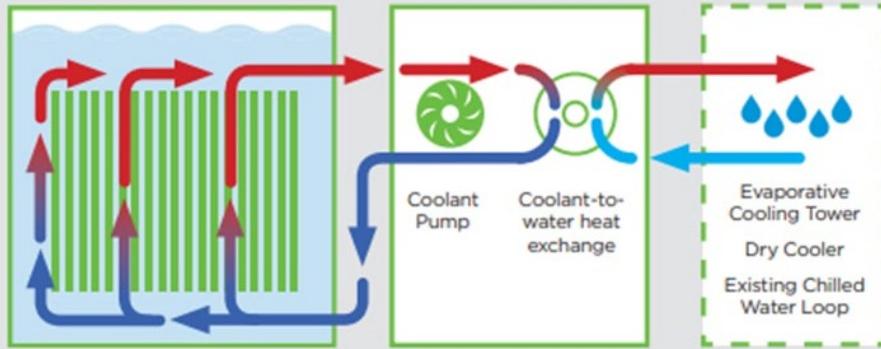
Heated coolant exits top of rack. Coolant returns to rack from heat exchanger at user-specified temperature.

<p>ii. A plenum, positioned adjacent the bottom of the tank, adapted to dispense the dielectric fluid substantially uniformly upward through each appliance slot; and</p>	<p>Below is an image of the HashRaQ which depicts a plenum positioned adjacent the bottom of the tank, adapted to dispense the dielectric fluid substantially uniformly upward through each appliance slot.</p> 
<p>e. A control facility adapted to control the operation of the primary fluid circulation facility as a</p>	<p>The HashRaQ has a Coolant Distribution Unit that operates as a control facility. This is confirmed below in a HashRaQ Max information sheet under monitoring and reporting. This information sheet details a control system adapted to control the operation of the primary and secondary circulation facilities as a function of the temperature of the dielectric fluid in the tank.</p>

function of the temperature of the dielectric fluid in the tank.

How GRC Liquid Immersion Cooling Works

Open Data Center Server Racks Filled with Circulating Single-Phase Coolant Coolant Distribution Unit Final Heat Rejection Options



Heated coolant exits top of rack. Coolant returns to rack from heat exchanger at user-specified temperature.

 																																													
General Product Specifications <table border="1"> <tr> <td>Number of Immersion-Cooled Racks</td><td>2</td></tr> <tr> <td>Total Miner Capacity</td><td>48 Bitmain S19 miners</td></tr> <tr> <td>Number of CDUs per Double-Capacity Rack</td><td>1³</td></tr> <tr> <td>Total Cooling Capacity</td><td></td></tr> <tr> <td> Chiller-Free Water: 40°C (104°F)</td><td>288 kW⁴</td></tr> <tr> <td>Over-Clocking Capability</td><td>6 kW/miner⁵</td></tr> <tr> <td>pPUE⁶</td><td><1.02</td></tr> <tr> <td>Standard PDU Details</td><td></td></tr> <tr> <td> Quantity</td><td>Four</td></tr> <tr> <td> Outlets</td><td>24 C19 each</td></tr> <tr> <td> Architecture</td><td>Basic</td></tr> <tr> <td> Circuit Breaker Amps</td><td>160A each</td></tr> <tr> <td>Alternate PDUs Available</td><td></td></tr> <tr> <td>Overall Dimensions (L x W x H)</td><td>2.85 m x 1.97 m x 1.55 m (9.4 ft x 6.5 ft x 5.1 ft)</td></tr> <tr> <td>Estimated Component Weights</td><td></td></tr> <tr> <td> Racks, CDU, and Stand</td><td>227 kg (500 lbs)</td></tr> <tr> <td> Coolant</td><td>860 kg (1894 lbs)</td></tr> <tr> <td>Estimated Weight When Commissioned⁷</td><td>1950 kg (4300 lbs)</td></tr> </table>	Number of Immersion-Cooled Racks	2	Total Miner Capacity	48 Bitmain S19 miners	Number of CDUs per Double-Capacity Rack	1 ³	Total Cooling Capacity		Chiller-Free Water: 40°C (104°F)	288 kW ⁴	Over-Clocking Capability	6 kW/miner ⁵	pPUE ⁶	<1.02	Standard PDU Details		Quantity	Four	Outlets	24 C19 each	Architecture	Basic	Circuit Breaker Amps	160A each	Alternate PDUs Available		Overall Dimensions (L x W x H)	2.85 m x 1.97 m x 1.55 m (9.4 ft x 6.5 ft x 5.1 ft)	Estimated Component Weights		Racks, CDU, and Stand	227 kg (500 lbs)	Coolant	860 kg (1894 lbs)	Estimated Weight When Commissioned ⁷	1950 kg (4300 lbs)	Monitoring and Reporting <table border="1"> <tr> <td>Platform</td><td>IoT with Modbus TCP/IP for BMS interface</td></tr> <tr> <td>Alerting</td><td>Alerts via DCIM platform</td></tr> <tr> <td>DCIM/BMS Integration Protocols</td><td>Modbus</td></tr> <tr> <td>Measurements and Fault Detection</td><td>Operating temperatures of coolant and water Coolant pressure Coolant levels</td></tr> </table>	Platform	IoT with Modbus TCP/IP for BMS interface	Alerting	Alerts via DCIM platform	DCIM/BMS Integration Protocols	Modbus	Measurements and Fault Detection	Operating temperatures of coolant and water Coolant pressure Coolant levels
Number of Immersion-Cooled Racks	2																																												
Total Miner Capacity	48 Bitmain S19 miners																																												
Number of CDUs per Double-Capacity Rack	1 ³																																												
Total Cooling Capacity																																													
Chiller-Free Water: 40°C (104°F)	288 kW ⁴																																												
Over-Clocking Capability	6 kW/miner ⁵																																												
pPUE ⁶	<1.02																																												
Standard PDU Details																																													
Quantity	Four																																												
Outlets	24 C19 each																																												
Architecture	Basic																																												
Circuit Breaker Amps	160A each																																												
Alternate PDUs Available																																													
Overall Dimensions (L x W x H)	2.85 m x 1.97 m x 1.55 m (9.4 ft x 6.5 ft x 5.1 ft)																																												
Estimated Component Weights																																													
Racks, CDU, and Stand	227 kg (500 lbs)																																												
Coolant	860 kg (1894 lbs)																																												
Estimated Weight When Commissioned ⁷	1950 kg (4300 lbs)																																												
Platform	IoT with Modbus TCP/IP for BMS interface																																												
Alerting	Alerts via DCIM platform																																												
DCIM/BMS Integration Protocols	Modbus																																												
Measurements and Fault Detection	Operating temperatures of coolant and water Coolant pressure Coolant levels																																												
Site Requirements <table border="1"> <tr> <td>Client provides</td><td>Access to power and recirculating water⁸ Secondary containment Level surface (slab or raised floor) with slope <1/650 Standard data center fire suppression as required</td></tr> <tr> <td>Operating Environment</td><td>Ambient temperature 5 to 45°C (40 to 113°F)</td></tr> </table>	Client provides	Access to power and recirculating water ⁸ Secondary containment Level surface (slab or raised floor) with slope <1/650 Standard data center fire suppression as required	Operating Environment	Ambient temperature 5 to 45°C (40 to 113°F)	Delivery and Installation <table border="1"> <tr> <td>Lead Time</td><td>Typically ships within 12 weeks after receipt of purchase order.</td></tr> <tr> <td>Shipping Terms</td><td>Ex-Works</td></tr> <tr> <td>On-site Installation and Training⁹</td><td>One business day per unit</td></tr> </table>	Lead Time	Typically ships within 12 weeks after receipt of purchase order.	Shipping Terms	Ex-Works	On-site Installation and Training ⁹	One business day per unit																																		
Client provides	Access to power and recirculating water ⁸ Secondary containment Level surface (slab or raised floor) with slope <1/650 Standard data center fire suppression as required																																												
Operating Environment	Ambient temperature 5 to 45°C (40 to 113°F)																																												
Lead Time	Typically ships within 12 weeks after receipt of purchase order.																																												
Shipping Terms	Ex-Works																																												
On-site Installation and Training ⁹	One business day per unit																																												
Power and Water <table border="1"> <tr> <td>Final Heat Rejection Options</td><td>Flexible options can include: Adiabatic/evaporative cooling tower Dry cooler¹⁰</td></tr> <tr> <td>Water Requirements</td><td>Maximum particulate size 0.8 mm¹¹ Input temperature 40°C (104°F) Recirculating flow 29.5 m³/hr (130 gpm) 6 to 9°C dT (10 to 15°F dT) Connection 73.0 mm (2.5") male Victaulic</td></tr> <tr> <td>CDU Power Requirements</td><td>1x 3PH 460VAC 60Hz, max power consumption 3.7kW</td></tr> <tr> <td>PDU Power Requirements</td><td>4x 160A 415Y/240VAC¹²</td></tr> </table>	Final Heat Rejection Options	Flexible options can include: Adiabatic/evaporative cooling tower Dry cooler ¹⁰	Water Requirements	Maximum particulate size 0.8 mm ¹¹ Input temperature 40°C (104°F) Recirculating flow 29.5 m ³ /hr (130 gpm) 6 to 9°C dT (10 to 15°F dT) Connection 73.0 mm (2.5") male Victaulic	CDU Power Requirements	1x 3PH 460VAC 60Hz, max power consumption 3.7kW	PDU Power Requirements	4x 160A 415Y/240VAC ¹²	Warranty <table border="1"> <tr> <td>Includes 90-day limited warranty against defects in material and workmanship with limited support. Annual monitoring plans</td><td>Other plans available for additional cost: Full year limited warranties and support plans Annual maintenance plans</td></tr> </table> <p>³ An additional spare CDU available for additional cost. ⁴ CDU is designed for up to 288 kW (6 kW per miner). Actual cooling capacity will depend on end user's specified level of over-clocking, as well as final heat rejection system. ⁵ Over-clocking greater than 6 kW/miner may require cooler/chilled water. ⁶ General specification assuming 6 kW/miner. Values will change if end user utilizes less over-clocking. ⁷ Includes coolant, mining equipment, cables, and cords. Actual weight depends on configuration. ⁸ System cooling performance dependent on climate. ⁹ Failures resulting from particulates exceeding 0.8mm or poor water quality will void warranty. ¹⁰ One input power feed per PDU. ¹¹ GRC and HTS can assist in heat rejection design/implementation. ¹² Installation applies to installing the rack in the data center space only and does not include installation of digital asset mining equipment.</p>	Includes 90-day limited warranty against defects in material and workmanship with limited support. Annual monitoring plans	Other plans available for additional cost: Full year limited warranties and support plans Annual maintenance plans																																		
Final Heat Rejection Options	Flexible options can include: Adiabatic/evaporative cooling tower Dry cooler ¹⁰																																												
Water Requirements	Maximum particulate size 0.8 mm ¹¹ Input temperature 40°C (104°F) Recirculating flow 29.5 m ³ /hr (130 gpm) 6 to 9°C dT (10 to 15°F dT) Connection 73.0 mm (2.5") male Victaulic																																												
CDU Power Requirements	1x 3PH 460VAC 60Hz, max power consumption 3.7kW																																												
PDU Power Requirements	4x 160A 415Y/240VAC ¹²																																												
Includes 90-day limited warranty against defects in material and workmanship with limited support. Annual monitoring plans	Other plans available for additional cost: Full year limited warranties and support plans Annual maintenance plans																																												

